

## List of Birds found Breeding in and around the Swamps near Moora, W.A., during 1921

By P. T. SANDLAND, R.A.O.U., and O. L. E. ORTON,  
R.A.O.U.

*Porzana pusilla.* Little Crake.—One nest found among bulrushes and tea-tree containing three eggs, but when examined a week later the eggs had disappeared.

*Porphyrio bellus.* Blue Bald-Coot.—Four nests found containing 3, 4, 4, and 5 eggs. Nests always built on a fallen bough among bulrushes and tea-tree. Rare.

*Fulica atra.* Coot.—Very common. Nests principally in the swamps that are free of bulrushes. Number of eggs varies from five to fifteen, the latter number no doubt being a combination clutch. The breeding season lasts from August to January.

*Carphibis spinicollis.* Straw-necked Ibis.—First occasion. Large flocks often to be seen during winter and early summer. A number of birds commenced building on tea-tree in Marrida Swamp. Several nests contained one and two eggs, but next time we examined them the eggs were broken and the birds had forsaken, although still living on the swamp.

*Platalea flavipes.* Yellow-billed Spoonbill.—First occasion. Eight birds lived on the swamps all the winter. Two nests were found in Street's Swamp, built in paper-bark trees, containing three eggs. Another in Blue Gum Swamp, with two eggs, and when this nest was examined a week later the eggs were hatched. This, I think, is the furthest south these birds have been recorded breeding in W.A.

*Notophox novaehollandiae.* White-fronted Heron.—Very common. After the Coots and Cormorants, it is the most plentiful bird found breeding round the swamps. These birds are often found breeding fully half a mile from water. Usual number of eggs four or five, in about equal proportion. Have found nests at all heights from 5 to 50 feet from ground or water.

*Ixobrychus minutus.* Little Bittern.—Rare. Two pairs of birds bred in the Bulrush Swamp, on opposite sides. They are late breeders. On November 13th we observed two nests containing two eggs heavily incubated and four eggs not quite so far advanced. Something must have happened the first pair, as three weeks later we found a set of four eggs within 35 yards of the previous nest containing two eggs. The second pair was not found again. The nests are small, neat platforms, about 6 to 7 inches in diameter, and about 2½ inches deep, placed in each instance on a leaning limb among tea-tree and bulrushes. Nests were made on a foundation of bulrushes, bent down on to a leaning limb, and then short pieces of rushes were placed across and across, and lined with shorter, finer pieces. Height above water, 15 inches to 2 feet. In 1918 we found two nests containing three and four eggs, and one nest was fully five feet above water. The birds were first seen on the swamp in September, when they flushed easily; but, when they were nesting, they preferred to sneak away through the rushes.

*Botaurus poiciloptilus.* Australian Bittern.—Rare. Two nests were found on October 15th and 16th at Karo and the Three-Mile Swamp, some 45 miles west of Moora. The first nest was built in a patch of dense spearwood, and contained three young and two eggs just chipping. The second contained four incubated eggs. A pair was heard

calling in a dense thicket in one of the swamps near Moora, but we could not locate the nest. The nests are roughly made platforms of sticks, placed on a fallen stick, just above water level.

*Chenopsis atrata*. Black Swan.—Five nests were found. The eggs in four had hatched out, and the fifth contained five heavily incubated eggs. One nest built of sticks, and lined with tea-tree, was in a tea-tree thicket, the others were merely platforms of bulrushes. The birds breed early in this district, as all these nests were found early in September.

*Stictonetta nævosa*. Freckled Duck.—Rare. Two nests were found, the first contained seven eggs on the point of hatching, and the second contained two eggs when found, and five noted a week later. Both nests undoubtedly belonged to the same pair of birds. On December 24th a flapper was shot by a third-rate sportsman on the same swamp. This Duck builds a nest of fairly fine sticks on a leaning limb in a thick, bushy tea-tree, just above water level. The nest is lined with finer twigs and tea-tree twigs and, of course, down. In 1918 a nest was noted with seven moderately incubated eggs.

*Nyroca australis*. White-eyed Duck.—Fairly common, nests rare. Two nests were found, each with seven eggs, but one also contained a single egg of the Musk-Duck. The nest is always placed in a thick, bushy, isolated tea-tree growing among bulrushes. It is composed of trodden-down rushes for a foundation, and then a deep structure is made of bulrushes and lined with down. This bird builds a much deeper and neater nest than either the Blue-billed, or Musk-Duck, both of which build in similar positions. In 1918 several nests were noted with seven and eight eggs usually, and in one instance ten.

*Oxyura australis*. Blue-billed Duck.—Rare. Two nests were observed with five and six eggs respectively. Nests are as a rule merely trodden-down bulrushes, in a thick, bushy tea-tree. In two instances eggs were taken from stick nests. The nesting bush always has a thick, bushy top. When among bulrushes and tea-tree, the nest always has a dome of rushes. In 1918, which was a wonderful year for Ducks, seven nests were noted. One nest contained eight eggs; four, six each; one, five; and one, three eggs. The three-egg clutch was the first found and was considered in mistake a Musk Duck's nest. Evidently five or six is the usual complement of eggs laid. Have given numbers of all nests yet noted by us, as both North and Campbell give smaller numbers.

*Biziura lobata*. Musk-Duck.—Common. Although nothing like so common as the Gray (Black) Duck and Teal, more nests are found of this species than all the other Ducks together. Their tastes for nesting sites are much more cosmopolitan than those of the two preceding species. The favourite site is a bushy tea-tree growing among bulrushes. In the more open swamps any thick bush will do, and they are adepts at "jumping the claims" of other birds. Number of eggs, two and three, principally three, and in four cases, out of some 50-60 nests examined, we have found four eggs.

*Anas superciliosa*. Gray (Black) Duck. *Nettion gibberifrons*. Grey Teal.—Although so extremely plentiful, no nests were noted on the swamps last season.

*Phalacrocorax ater* (Little Black Cormorant) and *Microcarbo melanoleucus* (Little Pied Cormorant).—There is a large colony of these birds in Street's Swamp, and a small one in Marrida. Nests are all built of sticks, and placed in paper-bark thickets in the deeper parts of swamps. The Little Black Cormorant usually prefers to nest near the top of the trees, and generally lines its nest with strips of paper-bark. The Little Pied Cormorant nests anywhere, and uses green fronds of paper-bark tree to line its nest with. The number of eggs laid is either four or five. In the first week of September.

1918, some nests contained large young ones, and others were in all stages from that down to building. Odd birds were still laying in January. Usually eggs can be seen from the end of August to the middle of November.

*Anhinga nove-hollandie*. Australian Darter.—A few pairs usually about. Found breeding for the first time last season, when five nests were found, all containing four eggs. Nests were built of green tea-tree twigs about a foot long, and were placed on leaning forks. One nest was found in the Cormorant rookery, the other four were in larger trees on the outskirts.

*Astur fasciatus*. Australian Goshawk.—Rare. Two nests were found; one at Karo Swamp, containing two eggs, and another with three eggs in a large red gum in a watercourse leading to Walyerin Swamp, several miles nearer Moora. Several nests have been taken at odd times, and the eggs are usually smaller than eggs from the Eastern States. However, the pair seen at Karo are the largest I have yet seen. In 1908 I examined 12 sets of eggs of *Astur fascians* in S.A., and retained two, the largest set, and the best-marked set. The above pair are larger than either of these sets.

*Hieraetus pennatus*. Little Eagle.—Rare. One pair of birds nested near the Bulrush Swamp, and when robbed moved away about a quarter of a mile and nested again. In each instance only a single egg was laid. Have seen four other nests at different times, and twice a pair of eggs was laid. In each instance one egg was distinctly smaller than the other, although the eggs belonged to different pairs of birds. Have never known them to build their own nest. They patch up an old Crow's nest and line it with green gum leaves.

*Haliastur sphenurus*. Whistling Eagle.—Rare. One pair nested in a large dead white gum, near the swamps. This is the first record of these birds in the district to our knowledge. Eggs were taken twice from the same nest. Among the nesting material was the backbone of a lamb, dried-up skeleton of a rabbit, and wing of a Musk-Duck. They laid two eggs the first time, and three the second. The second climb was made lively by a swarm of bees, which had taken possession of a hollow about 15 feet below the nest, and being a hot day, they were extra spiteful.

*Cerchneis cenchroides*. Nankeen Kestrel.—Common. A pair nested in a hollow in same tree as the Whistling Eagle's nest, but only about 20 feet from the ground. Have never known this bird to nest in an old Crow's nest in this district, but always in a hollow. Three or four eggs form a clutch here, usually four.

*Ninox boobook ocellata*. Marbled Owl.—Rare. While I was climbing to nest of the Whistling Eagle, Mr. Orton went round tapping trees with the tomahawk, and flushed a bird within 150 yards. The nest contained three eggs, and ended a quest of years, as I had previously only a single egg in my collection. These birds moved away about a quarter of a mile, and we found the nest later with newly-hatched young in it. Eggs are merely laid on wood-dust at bottom of hollow.

*Barnardius zonarius*. Yellow-Banded Parrot.—Common. Nests hard to find as birds seldom flush, and don't gnaw round the hollow as most Parrots do. Found one nest containing five eggs, and two with young, judging by the chorus set up at the first stroke of the tomahawk. Five and six are the usual number of eggs laid, very rarely seven, and in one instance eight.

*Psephctus varius*. Many-coloured Parrot.—Rare. One nest found contained young birds. This is the first known instance of their breeding so close to Moora.

**Halcyon sanctus.** Sacred Kingfisher.—Common. Numbers of these birds breed every year in any suitable trees. Five eggs is the usual number, with an odd example of six.

**Merops ornatus.** Rainbow Bee-eater.—Common. Nesting tunnels may be found at odd intervals all round the swamps.

**Lamprococyx plagosus.** Bronze-Cuckoo.—Common. The principal foster-parent for this Cuckoo is the Yellow-tailed Tit-Warbler (*Geobasilcus chrysorrhous*).

**Cuculus pallidus.** Pallid Cuckoo.—Common during spring. Foster parents usually selected are Wattle-Birds (*Anthochaera carunculata*), Dusky Miner (*Myzantha obscura*), Tawny-crowned Honey-eater (*Glyciphila fulvifrons*), White-naped Honey-eater (*Melithreptus lunulatus*), and the Black and White Fantail (*Rhipidura leucophrys*).

**Hylochelidon nigricans.** Tree-Martin.—Common. Nests may be found in any old hollow trees during the nesting season, but usually quite safe on account of the rotten nature of the limbs.

**Rhipidura leucophrys.** Black and White Fantail.—Common. Nests are found as often in paper-bark trees growing in the swamps as among timber on land.

**Seisura inquieta.** Restless Flycatcher.—Not so common as the above species. Always nests in trees growing in the swamps.

**Acrocephalus australis.** Australian Reed-Warbler.—Rare until the wet years of 1917 and 1918; since then fairly plentiful. Nests among tea-tree and spearwood thickets in swamps. Nests are placed at all heights from one to eight feet above water. Lays three and four eggs in about equal proportion.

**Megalurus gramineus.** Little Grass-Bird.—A few pairs breed in bulrush swamp. The nests are always placed in a thick, bushy tea-tree growing among thick bulrushes. Average height of nest above water about one foot. Three or four eggs form a clutch.

**Geobasilcus chrysorrhous.** Yellow-tailed Tit-Warbler.—Very common. Nests in any and every suitable position, and rears at least two, and often three, broods in a season. Eggs may be found from July to December. Lays three or four eggs usually, five being extremely rare.

**Zosterops gouldi.** Green-backed White-eye.—Birds common, nests rather hard to find, on account of the thickets they nest in. Number of eggs three usually, two occasionally, especially in the early part of the season.

**Stigmatops indistincta.** Brown Honey-eater.—One or two nests are usually found each season. Two eggs are invariably laid.

**Anthochaera carunculata.** Wattle-Bird.—Very common. Numbers of nests are to be found, but are not taken unless containing an egg of the Pallid Cuckoo.

**Corvus cecilæ.** Australian Crow.—Common. Build in the tall paper-barks in the swamps. Four eggs is the usual number laid, five only found occasionally. They destroy quite a number of Ducks' eggs every year.

**Cracticus torquatus leucopterus.** White-winged Butcher-Bird.—Common. Three eggs are laid almost as often as four.